

AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.
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AMS 5360

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Revised

STEEL CASTINGS, PRECISION INVESTMENT, CORROSION AND HEAT RESISTANT 17Cr - 13Ni - 2Mo

1. **ACKNOWLEDGMENT:** A vendor shall mention this specification number in all quotations and when acknowledging purchase orders.
2. **APPLICATION:** Small parts, such as stator vanes and nozzle diaphragm vanes for use at temperatures up to 1600F. At high temperatures, strength of this steel is slightly higher than, and oxidation resistance is similar to, that of the 18-8 types.
3. **COMPOSITION:** Castings shall conform to the following:

Carbon	0.15 max
Manganese	2.00 max
Silicon	0.75 max
Phosphorus	0.04 max
Sulfur	0.03 max
Chromium	16.00-18.00
Nickel	12.00 min
Molybdenum	1.50-2.25
Copper	0.50 max

4. **CASTING:** Castings shall be poured either from remelted master heat metal or directly from a master heat. A master heat is previously refined metal of a single furnace charge. Gates, sprues, risers and rejected castings shall only be used in preparation of master heats but shall not be remelted directly, without refining, for pouring of castings.
5. **CONDITION:** As cast, unless otherwise specified.
6. **QUALITY:**
 - (a) Castings shall be uniform in quality and condition, sound and free from foreign materials and from internal and external defects detrimental to fabrication or to performance of parts. Castings in which defects are revealed during fabrication will be subject to rejection. Castings shall have smooth surfaces and shall be well cleaned. Unless otherwise specified, metallic shot or grit shall not be used for final cleaning.
 - (b) When castings are broken for fracture test, the fracture shall have a uniform color and be substantially free from oxides and other defects.
 - (c) Unless otherwise specified, castings shall be produced under radiographic control.
 - (d) Inspection standards and procedures shall be as agreed upon by purchaser and vendor.
 - (e) Castings shall not be repaired by plugging, welding or other methods without written permission from the purchaser.